[The following paper is the Oration of a member of the graduating class at the recent Anniversary of Acadia College. On application, it was given, somewhat reluctantly, as not prepared with any expectation of publication. It contains much valuable thought, and will be read with interest, both by those who heard it, and others who did not. ED. C. M.]

TENDENCIES OF MODERN SCIENTIFIC INQUIRY.

BY G. F. CURRIE.

The current of philosophic thought, in its progress through the ages, has not always advanced steadily toward the truth. Important deviations have occurred in one direction or another, which have seriously retarded the true growth of science. From the earliest historic times thoughtful men have been occupied in studying the phenomena of nature; and numerous systems of philosophy, have been constructed, and offered for general acceptance. But scarcely any scientific discoveries of permanent value were made until the ancient Greeks became the intellectual leaders of the race. In the treatment of subtle metaphysical questions the activity and acuteness of the Greek mind have probably never been surpassed. In those departments of inquiry which depend on pure deduction, their philosophers have rendered real service to the world, and left behind them valuable legacies to enrich the science of more ancient times.

But their efforts to interpret physical phenomena were almost a total failure.—Proceeding upon unsound principles, they reached the most unphilosophical results; and arrived at no important conclusion which modern scientests can accept. The Roman and mediæval philosophers made no advance upon their Grecian masters in physical science, and scarcely rose above the position of servile imitators. Original and independent investigation was almost unknown for centuries. Superstitious reverence for the past was prevalent during the long intellectual night of the mediæval period, and held men in ignoble bondage, from which few, if any, dared to break away. Thus the conservative spirit was carried to an injurious extreme, hindering the legitimate exercise of the intellect in the independent search for truth, and hence, preventing men from attaining to that type of intellectual development of which they were capable.

In striking contrast however with this mediæval conservatism is the radical spirit of the modern scientific world. Radicalism in philosophy now appears to threaten as great or greater evil than conservatism produced in former days. In the revulsion from the well nigh exclusive study of metaphysics, which prevailed in the past, many of the leaders of modern thought have apparently fallen into the opposite error of looking upon physics as the only proper subject of inquiry. And by thus taking a one-sided view of the truth, they are liable to adopt conclusions no less erroneous and more dangerous than the notions of the school men. It would appear that the overthrow of so many systems of philosophy, cherished in the past, has led them to suppose that nothing which is old can stand the test of modern examination; and in their iconoclastic zeal, they proceed to demolish without hesitation nearly everything in human belief, however well-established and serviceable, which bears the impress of age.

It must be freely admitted that the adoption of the inductive method of inquiry, as expounded by Bacon, has indeed led to grand results in liberating men from intellectual thraldom, and enlarging the bounds of true science; and all honor is due to the men who in opposition to the current opinions of their day, sought from Nature herself an answer to the questions which she suggests, and discovered with such wonderful exactness many of the laws which underlie material phenomena, yet who at the same time recognized the presence and controlling power of the Infinite Lawgiver. The world regards with unfeigned admiration the patient researches of a Copernicus, Galileo, and a Newton, and the success which attended their efforts to solve the mysteries of nature; and all lovers of the truth can justly rejoice in the vast progress of scientific discovery since their day. But it is well to note and guard against the extravagant conclusions to which the ultra-physical character of modern science naturally leads.

The rebound from the superstition of the past has carried a certain school of scientists a long way toward the opposite extreme, and there is now an apparent tendency to leave no place in their philosophy for the supernatural. The fundamental error of the system known as Positivism seems to lie in the foregone conclusion that the supernatural cannot be known. This philosophy deals only with phenomena, and takes no account of spiritual and transcendental forces. Hence all questions which occur to the attentive observer of nature are to be answered by explanations drawn from nature, or to be considered incapable of solution. Proceeding upon these principles, the adherents of Positivism, trace the laws of nature so far as they can by means of their crucibles and test tubes, their balances and solvents, and construct their theories upon a physical basis alone. They are hence subject to a tendency to enlarge the supposed sphere of the natural, to make it include and explain, if possible, all phenomena falling within human observation, while they are disposed to throw doubt and discredit upon testimony serving to establish such facts as cannot be thus explained.

If, when they reach the mysterious border-land which separates the physical from the mental, they would always frankly acknowledge that the facts of consciousness are not subject to chemical analysis, and cannot be referred to any physical origin, no reasonable complaint could be made against them. But, not satisfied with the exact results which they reach within the legitimate sphere of their investigations, they endeavor to account for the phenomena of mind by reference to the laws which govern matter and physical force. From the intimate connection of the mind with the body, the inference is drawn that the former may in some way be a product of physical organism, and hence that all the thoughts and emotions which arise in the soul of man may result from molecular movements of the brain. Thus the mightiest achievements of human intellect, including all that is grand in history, all that is dignified in philosophy, and all that is admirable in morals, are reduced to nothing more than matter, or the direct outgrowth of matter. The soul, as a distinct substance, and as liable in the future to have a separate existence, is not recognized.

It is difficult to understand why such an unusual basis should be adopted and retained by a school of thinkers occupying so high a standing in the scientific world.

The question comes to us:—Why must the supernatural always be unknown and unknowable? Why may not the Infinite Lawgiver suspend at times the ordinary laws of nature, and call into operation a higher system of laws, or produce effects by his own immediate agency? And why may not these transcendent acts of the Creator be known to man, as fully as his ordinary methods of procedure? The conclusion can hardly be avoided that the error may lie deeper than the intellect, having its root in the heart. Nor can we "overlook the tendency of men of great mental power to become 'men of one idea'—to overrate the value of their peculiar pursuit, and thus to throw a mist over the evidence of facts which have not for them the charm of a chosen theme."

The legitimate results of the premises and modes of inquiry adopted by the more radical scientists of the day, are quite obvious. If within the range of human observation there is no such thing as distinct spiritual existence, if the human soul is nothing but a compound of sublimated forms of matter, we can have no evidence of any sort of life other than that which originates in matter, and is found existing in material forms. Thus the natural tendency of such a system of philosophy is toward a cold, hard, cheerless materialism.

The habit of looking at phenomena from a material stand-point alone would lead to doubts as to the existence of a supreme spiritual Being presiding over the affairs of men; and the inquirer, finding no response manifested to his physical senses, is landed at length in practical if not theoretical atheism. While the exponents of Positivism admit that it would be unphilosophical to assert that there is *no* God; they nevertheless affirm that if there be a God, he cannot be known. He must ever remain hidden from the view of his creatures. They would have us believe that the Creator, if there be such, must be at an infinite distance from man, having entirely withdrawn from all connection with the realm of nature, and left the system of things to which we belong to work out its own destiny.

To avoid the conclusion that some unseen hand is controlling the movements of nature, and interposes at times by acts of creative energy, it has been assumed that each distinct species of living beings may have originated by development from some other *species, according* to the so-called laws of "natural selection" and the "survival the of fittest." If proof were at hand in support of this hypothesis, no objection need be raised against it on theological grounds. The doctrine would admit the exercise of creative power in the origin of the first species; and the production of others would still require the operation of the divine agency, as necessarily as in the act of original creation. The most serious objection to the Darwinian view of the origin of species is the fact that science in its present condition furnishes scarcely any evidence, which, when fairly weighed, can be regarded as a sufficient ground for its acceptance. The missing links in the supposed chain of development so persistently elude the search of inquirers that we may entertain grave doubt as to whether such links have ever existed. Another weighty objection to the theory of evolution, in its application to man, is found to be its insufficiency to explain his mental and moral endowments. It fails entirely to account for the immeasurable superiority which the human being possesses over every other form of animal life. The faculties of abstraction, of cumulative and inventive knowledge, of forming moral distinctions, and of speech, separate man by an impassable gulf from the most intelligent species of the brute creation. If we admit, as science does not require us to admit, that man may have descended *physically* by some process of natural development from lower types of animal life, his lofty intellectual and moral nature, so broadly distinguished from the highest intelligence of the brute, can only be explained by reference to some supernatural origin.

The doctrine of developement seems at present, to be a conjecture—being unsustained by facts, and inadequate to account for phenomena which it should explain, if true. It may be useful to scientists, as suggesting a plan of inquiry; but until it rests upon a more solid basis, let it not be advanced or accepted as setting forth an established law of nature.

The aim of the Positive school seems to be to remove all necessity for supposing that there is a Divine Creator and Controller of the universe. Hence the persistence of force and the unerring constancy of natural laws are insisted upon as indicating that no superior being ever interposes. Attempts are made to produce life by spontaneous generation. Matter is almost deified, as though possessing in itself latent elements and forces capable of developement, without any external cause, into all the forms of beauty and utility which surround us. Hero worship is commended, and man himself is made to usurp the throne of the Eternal. Into all such vagaries do men run when they persist in shutting their eyes to a class of subjective phenonema which should always be taken into account in seeking for a true and universal philosopby.

In view of the facts presented, there arises a question of considerable importance: How are the materialistic tendencies of the age to be counteracted? Not certainly by condemning physical science; but by exalting to its appropriate place the philosophy of mind. Let both fields of investigation be assiduously and honestly cultivated, and there need be no fear of any irreconcilable conflict. Is it right that in the study of nature, men should ignore that class of facts which cannot be subjected to physical tests, but which nevertheless are just as well established as any kind of material phenonema? Is not the testimony of consciousness as reliable as that of our corporeal senses? Are we not as certain of the existence of the ego as of the non-ego? Are not the laws which regulate the movements of the god-like human soul as worthy of study as those which operate in the processes of chemistry and mechanics? Are not the principles of logic as important as the automic theory? Is not a correct knowledge of the laws of imagination and taste as valuable as scientific theories concerning light and heat? Are not the methods of action which pertain to the human conscience as deserving of attention as the revelations of the spectroscope? Let physical science go forward and accumulate all the knowledge possible concerning phenomena within its own dominion; but let it not encroach upon the rights of its neighbors! Every discovery in the realm of matter, established by sound evidence, may be safely and readily accepted. But mere hypotheses resting chiefly upon an imaginary basis have no just claim to popular assent.

The principles which governed the illustrious Newton in his researches into the arcana of nature are worthy of general adoption. His habit was, to accept without hesitation any doctrine, however unpopular, which had unquestionable evidence in its favor; while he steadily rejected every theory, however agreeable or long established, of which the proof was wanting. An unflinching adherence to these simple rules would afford a safeguard against a narrow-minded intolerance on the one hand, and an unsettled latitudinarianism on the other. It would also secure protection against the specious and plausible errors which are so liberally propagated by modern thinkers.

Thus we see a careful conservatism is needed in the department of psychology, to withstand the destructive innovations with which it has been threatened. It behoves us to hold by the ancient landmarks of belief, which have withstood the wear of many centuries, rather than heed the teachings of a Protean rationalism, which tends so surely to lead the inquirer into the mists and fogs of a dreary and hopeless unbelief. Shall we not say to the investigators of material phenomena, when they have reached the limits of their department, "Thus far we will follow you, but no farther?" Shall we allow them to wage war against the most sacred institutions of the age, without raising our hands in their defence? Shall we permit the altar of prayer to be overthrown? Shall we give up our faith in that old volume which alone explains the darkest enigmas of human life, and which reveals the only truth that has ever met and satisfied the deepest longings of the human heart? Rather let us adhere to those positions against which the attacks of an unsound philosophy have never prevailed; and which, if wisely defended, promise ever to present an impregnable front to the onsets of error.

For the Christian Messenger.

DEAR BROTHER,—

In the May number of an English periodical, the *Leisure Hour*, there is a piece entitled, "Lost Atlantic Steamers," which contains some interesting, though somewhat melancholy accounts of the loss of steamers crossing the Atlantic Ocean, between the years 1841 and 1873, of which I have prepared a *condensed* account, with some slight alterations and additions, thinking you might consider it worth preserving as an historical record, and find a place for it in *our* valuable weekly visitor, the *Christian Messenger*.

Yours as ever,
G. J. C.

The writer of the article seems to consider that although, "in former years, when the keels of sailing ships alone furrowed the ocean," vessels, not a few were wrecked, foundered, burnt or capsized, &c., still probably, no such *wholesale* destruction of human life took place anterior to the period when steamers, with their *many hundreds* of passengers first began to traverse the Atlantic, as have since occurred. We should, indeed, says the writer, have undertaken a lugubrious task were we alone to chronicle the loss of the numerous magnificent steamers whose keels lie beneath the waves of the Atlantic, did we not also attempt to show how the causes which brought about their destruction, may, in a great measure, be avoided in future. It is generally supposed that shipwrecks are caused by the rage of the elements, but of the many vessels which went on shore only three or four appear to have directly suffered in consequence of stormy weather.—Miscalculations as to distances run, and courses steered, a *reckless* desire to make a quick run, *incompetent* officers, &c., is too often the cause of the melancholy disasters. All we can hope is, that these losses may serve as a warning to all concerned, and may induce more caution, and vigilance, and stricter discipline than has apparently hitherto prevailed.

The following list of lost Atlantic steamships is as complete as the records within reach will supply:—

1841—*President*, mysteriously disappeared.
1843—*Columbia*, wrecked on the coast of Nova Scotia.
1846—*Great Britain*, wrecked on coast of Ireland. *Tweed*, on Alacrames reef, off Yucatan.
1848—*Forth*, wrecked on same reef.
1850—*Helena Sloman*, foundered.
1852—*St. George*, burned. *Amazon*, do.
1853 *Humboldt*,—wrecked on coast of Nova Scotia.
1854—*City of Glasgow*, disappeared.—*Franklin*, wrecked. *Artic*, run down. *City of Philadelphia*, wrecked.
1856—*Pacific*, disappeared. *LeLyonnais*, run down.
1857—*Tempest*, disappeared.
1858—*New York*, foundered. *Austria*, burned.
1859—*Argo*, wrecked on the coast of Newfoundland. *Indian*, wrecked on coast of Nova Scotia. *Hungarian*, do.
1860—*Cannought*—burned.
1861—*Canadian*, wrecked on sunken ice. *North Britain*, wrecked.
1863—*Norwegian*, *Anglo-Saxon* and *Georgia*. All wrecked off Nova Scotia.
1864—*Bohemian*, wrecked off Nova Scotia. *City of New York*, wrecked on Irish Coast. *Jura*, wrecked at the mouth of the Mersey. *Iowa*, wrecked off Cherbourg.
1865—*Glasgow*, burned.
1866—*Scotland*, run down.
1868—*Hibernia*, foundered.
1869—*United Kingdom*, disappeared. *Germania* and *Cleopatra*, both wrecked on coast of Newfoundland.
1870—*City of Boston*, disappeared. *Cambria*, wrecked on Irish coast.
1872—*Dacian*, wrecked on coast of Nova Scotia. *Tripoli*, wrecked on Irish coast.
1873—*Brittania*, wrecked in the Clyde. *Atlantic*, wrecked on coast of Nova Scotia. *City of Washington*, wrecked on coast of Nova Scotia. *Ismalia*, disappeared.—*Missouria*, wrecked on the Bahamas. *Ville duHavre*, run down.

The *President* heads the list of mysterious disappearances. With what awful anxiety tidings of her were waited for can be remembered by many. None ever came. She left New York, 11th March, 1841, having on board, among *many* passengers, a son of the Duke of Richmond, Rev. B. Coskman and poor Power, an author and actor of Irish characters.

In the space of 33 years, nearly 50 fine steamers, including the West India mail-boats, have, while on their passage across the Atlantic, been destroyed—of these, 7, after leaving port mysteriously disappeared and have not been heard of—4 were run down by, or collided with other vessels. 4 were burned. 1 ran on sunken ice in the Straits of Belle Isle. One foundered in mid ocean, and another off the coast of Ireland, the remainder were wrecked either on the Irish or British coasts, or those of America. One of the most frightful and sudden catastrophes in this list was the case of the *Atlantic*. She left Liverpool 20th March, 1873, bound for New York, with about 1000 persons on board. Being it was said short of coal, she was steering for Halifax on a dark night, when the officers of the watch, supposing her to be much further off the land than was the case, mistook one light for another, and she run on a ledge of rocks off Meagher's Head. Whoever was to blame, there was evidently error in judgment or miscalculation as to the course, or this fine ship would not have been lost, or such fearful loss of life occurred, not a woman or a child saved; most of the hapless ones having been drowned in their berths below.

We repeat that there are few dangers in a passage across the Atlantic which may not, by care, skill and judgement be avoided. If shipbuilders and engine makers, shipowners and cargo-stowers do their duty—if a wakeful watch is kept below as well as a bright look-out on deck, and the captain is a careful navagator, the dangers of a passage across the Atlantic would be reduced to a minimum, such as it is indeed, with respect to one line of steamers, (the Cunard) of which during a long course of years, scarcely an accident of any serious consequence has occurred.

Religious Intelligence.

BLACK POINT, MARGARETS BAY.—*Dear Bro. Selden*,—Hoping to interest you or some of your readers, I feel inclined to give you a little sketch of what God has been, and still is doing for us at this Bay.

Perhaps there are but few places where the young have so generally been brought to God as at Indian Harbor. The Baptists of that community are in a little settlement of about two miles in length, and that not numerously settled. Yet 33 have been added to their strength by baptism. Every house has been visited in mercy.

At Hubley Settlement God is giving his people the victory, and we expect to baptize there again next Sabbath.

On this side of the Bay we are growing and the Church since our coming has doubled its membership. One of our great drawbacks here is the want of places of worship, but even in this we can report progress. In numbers this Church is small, but so scattered that three preaching stations appear to be necessary.

At Hubbards Cove our good brother